

REMARKS/ARGUMENTS

The Applicant has carefully considered this application in connection with the Examiner's Action and respectfully requests reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicant originally submitted Claims 1-20 in the application and previously added claims 21-41. The Applicant has presently amended Claims 21-22, 28-29, and 36-37 and has not added or canceled any claims. Accordingly, Claims 21-41 are currently pending in the application.

I. Formal Matters and Objections

The Examiner has objected to Claim 35 for informal reasons. The foregoing amendment corrected this informality.

II. Rejection of Claims 21-22, 25, 28-29, 32, 36-37 and 40 under 35 U.S.C. §102

These claims are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,501,425 to Nagumo, et al. (Nagumo). Nagumo fails to teach each and every element of the claimed inventions of Claims 21, 28 and 36. For example, Nagumo does not teach a planar trace that is co-planar or parallel with a non-overlapping ground plane. Contrary to the Examiner's assertions, the radiating electrode 3 is not a ground plane. This is unequivocally set forth at Col. 4, lines 1-11 in Nagumo where it specifically teaches that the ground electrode 5 is connected to the power non-supplied side radiating electrode (i.e. antenna 3), thereby distinguishing the ground plane 5 from the radiating antenna 3. Nagumo further specifically distinguishes between radiating electrodes 3 and 4 and ground, at Col. 5, lines 24-37. To make such an assertion, perhaps the Examiner is laboring

under the misconception that just because radiating electrode 3 is tied to ground electrode 5, it is functioning as a ground plane. From a basic technical premise the Applicant believes this is incorrect because having an antenna tied to ground does not necessarily make it a ground plane. Given the Examiner's logic, any antenna having one end tied to ground would make it a ground plane and not an antenna. Furthermore, Nagumo does not teach anywhere that radiating electrode's 3 purpose is to impedance match the antenna 4, which is the function of a ground plane. To the contrary, Nagumo teaches that radiating electrodes 3 and 4 collectively form a plural-resonance antenna where each one is separately configured to have orthogonal resonance directions to allow the mutual interference of the resonances of the two electrodes to be suppressed so that each of these antennas can individually operate at increased efficiency (Col. 5, lines 1-15) and allow superior plural-resonance conditions to be stably achieved and enable antenna characteristics to be improved. (Col. 6, lines 1-5).

Given that radiating electrode 3 is not a ground plane, the ground plane 5 taught in Nagumo is located on side 2b of the substrate and is, therefore, not co-planar or parallel with the surface on which the antenna is located and because it is so located, it does not meet the elements of the independent claims, as recited above.

Therefore, Nagumo does not disclose each and every element of the claimed invention and as such, is not an anticipating reference for independent Claims 21, 28 and 36 or their respective dependent claims. Accordingly, the Applicant respectfully requests the Examiner to withdraw the §102 rejection with respect to these Claims.

III. Rejection of Claims 23-24, 26-27, 30-31, 33-34, 39 and 41 under 35 U.S.C. §103

These claims are rejected under 35 U.S.C. §103(a) as unpatentable over Nagumo in view of U.S. Patent No. 6,075,485 to Lilly, et al. (Lilly). As discussed above, Nagumo does not teach a planar antenna trace that is co-planar or parallel with a non-overlapping ground plane with respect to Claims 21, 28 and 36. Further, there is no suggestion in the asserted combination. Nagumo does not suggest that the ground electrode 5 is co-planar or parallel with the planar antenna trace. As discussed above, the radiating electrode 3 of Nagumo must be configured such that its resonance direction is orthogonal to the resonance direction of radiating electrode 4. For this to be accomplished the radiating electrodes 3 and 4 and the ground electrode must have the configurations set forth in Nagumo, all of which have the ground electrode 5 located on the side of the substrate 2, and there is no suggestion to orient it in any other manner. Lilly does not cure the deficiencies of Nagumo because Lilly clearly teaches an overlapping ground plane.

Therefore, the combination of Nagumo and Lilly does not teach or suggest each element of independent Claims 21, 28 and 36 and their respective dependent claims, and as such, the combination fails to establish a *prima facie* case of obviousness with respect to these claims.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 23-24, 26-27, 30-31, 33-34, 39 and 41 under 35 U.S.C. §103(a). The Applicant therefore respectfully requests the Examiner withdraw the rejection.

IV. Allowable Subject Matter

The Applicant appreciate the Examiner's indication of the allowance of certain subject matter. However in view of the foregoing amendments and arguments, the Applicant believes that all claims are allowable over the art of record.

V. Conclusion

In view of the foregoing amendment and remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 21-41.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees or overpayments to Deposit Account 08-2395.

Respectfully submitted,

HITT GAINES, PC

A handwritten signature in black ink, appearing to read "Charles W. Gaines", written in a cursive style.

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